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Impact of some crop management practices on tomato infestation/infection by the whitefly-begomovirus complex in Cuba

J. Fernandez-Delgado[1], I. Grechi[2], A. Ratnadass[2], A. Casanova[1], O. Gómez[1], M. Sánchez[1], M.I. Hernández[1]

[1]"Liliana Dimitrova" Horticultural Research Institute, Mayabeque, Cuba
[2]Cirad, UPR HortSys, F-34398 Montpellier, France

Introduction. In the framework of the INCO-BETOCARIB Project titled "Begomovirus disease management for sustainable production of tomato in the Caribbean" which operated from 2003- 2006, we conducted a survey aiming at assessing the impact of cultural practices on the infestation/infection of tomato plots by whitefly (*Bemisia tabaci*)/begomovirus (TYLCV). **Materials & Methods.** The survey was conducted in the West and Central regions of Cuba in respectively 100 and 96 tomato plots in open fields (71% of the plots) and under shelter (29%). **Results and Conclusion.** Analysis of data showed that both TYLC resistant (e.g. Vyta and ARO 8479F1) and susceptible (e.g. Amalia and HC 3880) cultivars were cultivated in open fields whereas only resistant cultivars were cultivated in sheltered plots. In open fields, TYLC disease incidence and severity were found to be significantly higher on susceptible, compared to resistant cultivars. Whitefly infestation and TYLCV incidence were higher in the West region as compared to the Central region, while the reverse was observed for severity of the disease. Whitefly infestation in open fields was high when no chemical protection measure was applied in the nursery and low under high chemical protection. The reverse tended to be observed when considering chemical application in the field, which might be an indirect indication that chemical protection negatively affects natural regulation processes. Implications of the results of this survey for agroecological management of the vector/disease complex in Cuba are discussed.

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Keywords: *Bemisia tabaci*, Tomato Yellow Leaf Curl Virus, cultivar resistance, chemical protection

Corresponding Author: Jany Fernandez-Delgado **(**jany@liliana.co.cu)